



NWCG Smoke Committee

Activity Update July 2015



Membership Issues

- Welcome Tim Allen –FWS Air Program
- Welcome Melanie Pitrolo-FS NFS Air Program
- New Membership Potential – Peter Teensma - DOI Office of Wildland Fire

Outreach and Messaging

- Status of Activity Updates – Diana has finished up June and will follow with July.
- NWCG website is up – Need monthly updates through 2015 to be posted.
- Web Site activity – Elaine will turn new items in so we can be up to date on the website.
- Elaine & Pete worked out items for new website. Looks good for rollout Saturday 7/18.
- Elaine - Some groups not posting agendas – minutes are like their agenda. Everything posted in pdf—If not submitted as pdf, NWCG converts to pdf. SmoC will stick w/Activity Updates for now.

NWCG Business

- Discussed NWCG content on last call. Should have SmoC content. Pocket guide, Redbook, & wildfire incident management field guide (Fireline handbook).
- Pete spoke to Mark Fitch. Redbook review is aimed toward federal family. Let Pete know if you want to make comments. Bill Jackson/Region 8 has 1st try. Bill has a lot of experience—air program in the southeast. Pete & Mark will review next. Not much smoke content per Pete.
- SmoC funding proposals:
 - Did not fund emission workshops. Could try OWF for funding.
 - Smoke Symposium not currently funded – On list if more \$\$ become available. Work w/risk & emergency medical committees. Work on proposal to resubmit next year.
 - S – 130 - Online rollout/2017. Pete will send Elaine a paragraph for ‘Smoke: know the risk’.
 - Mark Jones/Training Committee – In the process of changing position task books.
 - Fireline Handbook (IRPG) – New topic included if current topic in handbook withdrawn.

Business talk with Hunter and the Marks

- Background: Tom, Hunter, Mark, & Mark working in Boise Wildland Fire IT lines of business defined by study on what the fire community needed, specifically IT data.
 - Charged to understand the business cost and what data people need to perform their jobs and improvements (pain points). Send forms to the group – send comments to Hunter.
- SmoC Data Use
 - Committee has interagency representation – uses data in many ways.
 - Vegetation is a key topic, representing fire activity and results.
 - Need data to populate national emission inventory used for setting standards.
 - Members involved in tracking wildfire smoke & downwind impacts.
 - Used 209 reports & InciWeb to track wildfire activity & forecast smoke.
 - BlueSky is another tool to model smoke.
- SmoC Pain Points and data improvements/needs:
 - Claudia: So many places to mine data & not all match – would be good to see consistency.
 - Gary: There is resistance to change making it difficult to make new data sources widely available. There is a lack of data on ground fuels (deep duff, peat) that have large smoke impacts when they ignite. Need community wide recognition that smoke is a concern.
 - Susan O’Neill: Info is available, but it’s not the right information for smoke. Need information on smoldering fuels (duff and ground fuels), and whether a fire continues to



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proceed through the smoldering phase, which may be missed by satellite. Also fire perimeters don't tell you how much area within is actually burning, or the type of fire. Other useful info would include: Plume rise information, time profile, projected blackened acres.

- Dan Chan: Tie the state fire location system into the federal system.
- Nick: Federal forest restoration burns to manage fuels near communities –State system doesn't have updated fuel calculations, uncategorized fuels (stumps, etc.) making reported smoke data inaccurate. Burners required to consult w/state on smoke predictions pre-burn.
- 1/3 of US households have respiratory health issues driving the need to ascertain smoke & smoke impacts as well as health and NEPA (for feds).
- Using a combination of models to generate smoke predictions & forecasts for incidents, Rx burn planning, & emission inventories. Use existing data, assumptions, & knowledge derived by experience rather than science.
 - NFDPRS, Fire Emission Productivity Simulator, dispersion w/VSmoke or HYSPLIT are used to determine whether or not to burn based on smoke impact on sensitive areas.
 - Assumptions/changes are made based on experience where the model may be incorrect or where model limitations/assumptions are known.
- Mike: Need better methods of estimating plume height, which is critical to determine smoke concentrations. Need a more streamlined way to get info - currently in too many places. Data is offered by the national weather service & sometimes included in IC 209 reports.
- Cindy: Interagency funding is provided for smoke, and the research is out there, but the disconnect is getting that research to the field operations.
- Gary: There is a lot of good research, but it takes a long time for it to get used in the field. Even good research needs to be worked with to apply it in the field, adjustments need to be made, and who is going to do that work – especially when funding is gone. Research and answers are out there. The research needs to be made into a tool to be used in the field.

Wildfire and Smoke Activity

- Air Resource Advisors: Availability of ARAs is good right now.
 - Erin Law, John Washington, and Susan/AirFire facilitated the success of our ARA work in Alaska. This has been appreciated by tribal communities dealing with smoke.
 - 2 ARAs deployed to AK (Andrea Nick and Mike Broughton). Experiencing challenges w/terrain & differences up north—learning by doing. Monitors will be operating soon in some smoke impacted communities.
 - 1 ARA trainee on the Willow Fire. 1 ARA demobilized from southern California.
 - Todd Johnson is inquiring if Canada needs ARAs. Pete – Not needed yet.
 - Carey & Sarah Henderson are in British Columbia. Applied some US resources to Canada.
- Mark – Experiencing a lull in forecast & activity levels.
 - Nick engaged in type 2 & 3 incidents. National preparedness went from 3 to 2. AK getting a lot of wetting rain. Drying in the NW this week. More rain will move in.
 - Features in the atmosphere—Hurricane in Baja. Models show tracking east through the Pacific, other models go thru Baja. Moisture will be high though.
- Shorter-term events—
 - Large fires taken off the map. Most large fires are contained. Decided last week to close it down until something new happens.
 - A couple of monitors will be operational soon in some smoke impacted communities.



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Gary Curcio items

- Mixing height draft completed – this is a draft and is not to be distributed.
 - Read & give comments to Gary by Monday, July 23rd.
 - The NWS (their Mixing Height Committee) has asked to see final draft.
 - Comments have been addressed – feel positive chief editor will approve journal article.
 - The article may not be published until August or September.
- Guidebook
 - Workgroup meeting not set yet. Gary will call Pete to discuss.
 - Andrea Nick asked for call on this and sent doodle poll but only got 2 responses.
- Following up with Fire Weather subcommittee on outreach.
- Working on Fire Danger subcommittee letter.

NSDRS revisions

- Subcommittee on fire danger had spring/summer mtg. Invited to SmoC meeting.
- Supposed to come out w/4 fuels for fire danger. Posted but is a work in progress.
- Decision already made. New information not being considered. This will have big implications. Won't say fire danger won't be important.

Upcoming Workshops-SmoC Participation

- AFE Fire Congress Research – November/2015
 - Pete – drafting a paper on wildfire and regulatory issues, will participate on a panel, and present a poster highlighting recent SmoC activities (including the Transportation Safety and Exposure Mitigation Guidebooks).
 - Josh – submitting a poster abstract to highlight the Frames website including SmoC Training Subcommittee work.
- SAF conference in Baton Rouge – Pete participating as a panel speaker on air quality challenges.
- IAWF Fire Behavior and Fuels Conference – April 2016
- IAWF International Smoke Symposium 2 – December 2016
- Others...AGU, Canada Wildfire...?

Smoke and Air Quality for Land Managers

- Jenn Croft & Jamie Trip reviewing course as a pre-requisite for S590/M580. Training subcommittee reviewing comments to determine changes & work w/Josh to implement them.

Pete – ARA Guidebook

- Progress slowed since Andrea has been in AK a little over a week. Leaves next Wednesday or Thursday so should be able to resume work pretty quick.
- Elaine—Clint Cross/FS Regional office is working on the Guidebook—will send out power point. Jan 2016 for 2 year concurrent. Old one will be ongoing.
- Met with regional committee – Looking for definition of “wildfire”. Exec Board would like it changed. Will send out for comments.
- Gary—Any suggestions on technical aspects? Elaine – Matt Jolly is the only technical person. This really should go through the Chairs. Will Send to Elaine & Robin to add their comments. They are working after 6-9 month interim so good time to re-engage.
- Gary—What does interpretation of “low” or “high” mean. Is it only important if “extreme”? Gives user community a chance to use it. Unknown if there has been any internal discussions.



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- **Tom Old – Presentation:** [April 14 LOB Data Inv Kick-off Deck - Final \(4\) \(2\).pdf](#)
 - Adjunct instructor at Boise State University in the MBA program with a focus on project management. Member fire management team in Boise.
 - The primary customer is the team in Boise and fire management team.
 - Wanted to understand the process. Missing in the product – fire planning & suppression.
 - Where are they getting the info? Trying to understand the cost of IT. Are they needed?
 - What is the best way to move forward?
 - For application on fire/smoke data. Driven from your community. In the past, creators made assumptions, put it together, and sent tool to you.
 - Previously: Fuel treatment, Preparedness, Incident management.
 - Bring Subject Matter Experts (SMEs) into the process now.
 - “Pain play” – “If I had a more responsive tool”, “If I had better resolution”, “If I understood the process better” are focus of interviews and then creators work to resolve issues.
 - Received 700+ comments from the interviews. Didn’t have issues regarding smoke data.
 - Most development happening around the center in Boise. Customers are all around the state. Identifying issues seen and develop from there.
 - Some studies were very theoretical. Getting extremely high responses such as: This is where I get it from, this is what I do, this is what data I need, & this is the information I provide.
 - That is something we can do at conclusion of the study. Do by high-med-low. Roadmap of applications—need to do “A” then “B” then “C”. They had to understand the building block.
 - Tom—Data will be in pdf form...There is not a big understanding of the architecture. From fuel side everything starts from the plan. Needed for NEPA.
 - Pete—is there still time for us to comment? Tom—yes you can comment—especially from process flows. We don’t know those. Want the process done by December.
 - Gary C—did anyone address surface fuels? They are very important...The database for surface fuel is covered. The database for ground fuels is not. This is a big issue for the smoke. Most agencies don’t get it. Need to get w/people who deal w/surface fires. Big part of the equation and we aren’t capturing it. Nobody is getting the ground fuels and what they are releasing into the atmosphere. Going to be a big thing to create another column.
 - Tom—what do you need to do your job? Gary C agrees there is a gap we deal with in the present. It is a never ending battle. Once you get to dust and below, that is Ground fire and the system doesn’t do it now – it is not being captured.
 - Pete—How do we proceed more effectively? Obviously went through key questions. Smoke line of business has changed to an input. Decisions need to be made with it.
 - Pete—The best way for the members to provide input from users will be during a call. Tom—Need a separate call. Would like to get Hunter, the lead on preparedness to be on the call. Pete—would like Tom on next call and will urge SmoC members to attend. Tom—Look at slides so can be aware of things they went over in the interviews. Tom will forward info to Pete for SmoC distribution. Think about how to engage our community that it is important to attend. If you can’t attend on the 7/30 call, send in your comments.
 - Found during all interviews “dispatch” isn’t included. Had to add data—“dispatch” is key to allocate positions and approach. Read daily incident reports. Have session to capture the pain points missing/not working in the process/application is not in the process/or is missing from the process where a lot of work is done—have to figure out the standing fuel and the ground fuel. But we’ve never had SMEs at that level.
 - Need to understand there is a smoke dynamic regarding climate change and a lot of other factors. Not just vegetation management. It is serious when you talk about health. This will



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give the opportunity to identify what we need, what we use now, how we can improve the info, validate info we collect remotely.

- Don't need to limit ourselves to 1 column, highlight the value and why it matters. As a community, we have the information and the others will listen for it.
- \$100 million going across the framework. Are we getting the best for our \$\$? Consider the key questions we are grappling with. What else is missing?
- Susan—how does this link w/Erwin? Pete—Erwin is once piece. This is 3 levels above Erwin. We've been interacting with Erwin but with SmartFire, there are still some shortcomings.
- Pete—we need to think of things to help improve it. What do we need to do our job? How specific is the acreage? They don't realize that we utilize SmartFire. Suggest providing that right away. Shows some pieces of modularity in BlueSky system & exemplifies how many pieces are there that are in a smoke forecast, impact from Rx fire. Many different outputs that are dictated by the primary info. Challenges you (Susan) have brought up right now.
- Susan—there is a lot of info out there but not always what we need for smoke. Finding InciWeb doesn't line up with what you know about fires. Different pieces are out there and figuring out what we need for a forecast isn't there.
- Pete—different sources of information, and yes, they are contradictory. How do we deal with that? Providing input in the process. Getting our foot in the door can identify there is stuff needed to provide a solution later.

Product Revision Schedule

- Wildland Fire Incident Management Field Guide (Red Book) (PMS 210), January 2014.
- Incident Response Pocket Guide (PMS 461), January 2014.
- Interagency Standards for Fire and Fire Aviation Operations, January 2015.
- Red Book comments due by 9/1/2015.

Subcommittee Report-outs:

Smoke Technical Topics

- Smoke Managers Guide — Working on emission factor fronts. Progress slow during fire season.
- Susan revised 1-pager and has sent it to Pete & Mark for their review.
- Susan's 1-pager sent out w/our comments. Longer multi-page document needs to be reviewed.

Smoke Training

- Working on 2nd draft of the Exposure Mitigation Guidebook.
- New version from someone who works at Trent/Proctor. Not sure agree with them. Reviewing the doc now. The Land Managers course is included.
- Jenn is on board w/580 (Fire Ecology) & 590 (Fire Manager). Josh will get materials to Jenn & integrate important coursework.

Smoke Managers

- New membership in upcoming months.
- Tammy Eagan presented on what has led to greater acceptance of fire in FL. Jim read from some of Steven Pyne's work. Discussed public education & update on wildfires.
- Next call will be discussion on California – suggest getting in touch with Sierra Forest Legacy, they have sent out ozone comments and are very engaged.
- Seeking new membership – Send those interested to Mike & Claudia.



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Round Robin Topics

- IAWF Smoke and Health Workshop materials posted online on Frames.gov/smoke, News and Events section and in the research section.
- Susan – largest number of IMETs deployed on the AK fires.
- Diana—report out from NACAA calls by EPA on the Exceptional Event Rule (June 24 & July 22).
 - EPA is continuing to develop revised language for the Exceptional Events Rule.
 - Rule proposal will be in the fall/2015 and final expected summer/2016.
 - Ozone impacts from wildfire guidance is being worked on concurrently.
 - Have had extensive outreach, but plan a webinar for stakeholders after the release.
- Dan Chan—Had briefing with Tesh Rao on the NEI last week – about 25 states provided fire data. Only a few states have done their own modeling. Looking for funding. GA going to agency QA. Will have Tesh do the calculations.
- Extended data call to September 15th, due to lack of funding on whole NEI process.
- SmoC members – have dialogue w/states that have not submitted data for the NEI.
 - Dan & Nick – contact points to contact states w/un-submitted data (TX, OK, & others).
 - Diana – Voluntary Rx fire plan in OK. Difficult to get information on burns when reporting is not mandatory.
 - Rx fires – included in state EIs so they are considered when regulations are developed.
 - Nick has some contacts in OR & ID but not in other western states.
 - Diana would like to be involved in helping with these communication efforts.
 - Pete will check with Dan Smith to participate on calls before NEI due date.
- Reported data isn't consistent from state to state or agency to agency. Consistency will help to improve the information.
- Rx fire activity—doesn't reflect what is actually burned. A lot of what is reported is planned & some of that doesn't get burned—isn't blackened. Reflects on how people think about fire activity & smoke.
- Gary items – will follow up w/Fire Weather subcommittee on outreach. Gary is also working on a Fire Danger subcommittee letter.
- Pete – USDA reply to congress on ozone and fire.
- Term outreach position based in Lakewood, CO. Working for region 2 addressing smoke issues.